



Department of Energy

Idaho Operations Office
785 DOE Place
Idaho Falls, Idaho 83402

May 30, 1991

Mr. Michael Gearheard, Chief
Waste Management Branch
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, WA 98101

SUBJECT: Response to Regulatory Comments on Closure Plan for CPP-59, Kerosene Tank Overflow - ERD-209-91

REFERENCE: Letter from B. R. Monson to T. F. Burns, "Comments on the Review of Closure Plan for CPP-59, Kerosene Tank Overflow," dated May 9, 1991

Dear Mr. Gearheard:

This correspondence forwards the response to regulatory comments on the Closure Plan for CPP-59, Kerosene Tank Overflow to your office for review and approval. These comments were transmitted to DOE-ID in the reference listed above. The information provided to you in this correspondence includes detailed responses to each comment identified in the above reference and an errata sheet to be attached to the original Closure Plan submitted. Based on the response to the comments, DOE-ID still recommends no further action at this site.

If you have any questions, please contact W. N. Sato at (208) 526-0193 or L. A. Green at (208) 526-0417.

Sincerely,

A handwritten signature in black ink, appearing to be "T. F. Burns, Jr.", is written over a horizontal line.

T. F. Burns, Jr.
Deputy Assistant Manager
Environmental Restoration and
Waste Management

Enclosure

Mr. Michael Gearheard

-2-

cc: J. D. Ledger, IDHW, w/encl. (2)
L. J. Mann, USGS, w/encl.
I. Resendez, DOE-ID, w/o encl.
C. R. Enos, DOE-ID, w/encl.
O. K. Earle, w/o encl.
D. J. Blumberg, EG&G, w/o encl.
J. Rodin, EPA, w/o encl.
D. Tetta, EPA, w/encl.
B. R. Monson, IDHW, w/encl.
ERP ARDC, w/encl.

Response to EPA and IDHW Comments on CPP-59 Closure Plan

Comment 1.

Section 1.1, page 1, second paragraph, General Description. The Closure Plan describing the September 29, 1983 kerosene spill of 60 gallons stated "the majority of the spill remained within the bermed area." There is no estimate of how much actually spilled outside the bermed area. The location of the spill is not mentioned or whether samples were taken in the 60 gallon spill area. Please provide information as to how much of the 60 gallons actually were outside the bermed area, where it was located, and if samples were taken in the area.

Response:

The description provided in Section 1.1 of the September 29, 1983 60-gallon spill is all that is known about the spill. WINCO assumes the spill was contained within the bermed area (based on Unusual Occurrence Report No. 83-52, dated 10-5-83). However, there was not sufficient documentation available to confirm this, or to provide an estimate of how much may have spilled outside the bermed area.

Section 1.1 provides a general description of the facility and is not the appropriate place to discuss sampling locations. Sampling locations are discussed in Section 6 and were selected based on areas likely to be affected by the reported spills.

Comment 2.

Section 1.1, page 5, first paragraph. It is stated that when the bulk storage tank (WDS-100) overflowed, the foam fire protection line on the tank filled with kerosene and subsequently drained out of a vent outside the bermed area. Where is the vent located? There is no indication on any of the maps or diagrams of the facility as to where the foam fire protection line or vent are located. There is no way to tell from any of the information provided in the Closure Plan whether or not soil sampling was done at the site of the spillage outside the secondary containment area.

Response:

The location of the vent for the foam fire protection line will added to Figure 9 (Revised 5/28/91). For information, the volume of this line is estimated to be less than 13 gallons.

Comment 3.

Section 1.3, page 6, Closure Goals. Based upon the closure goals stated, it is not clear whether it is the intent to actually close CPP-59 or continue its operation. In either case, based on the content of this Closure Plan, insufficient and inadequate information is provided in this Closure Plan.

Response:

It is WINCO's intent to clean close this unit (kerosene spill) under RCRA. It should be noted that the closure plan addresses the kerosene spill only and not the operational kerosene storage tanks which will continue to be used. The kerosene used in the tanks is not classified as an ignitable material and therefore not subject to RCRA closure requirements. This unit will be clean closed under RCRA since no RCRA wastes have been spilled or disposed at the site. In addition, sampling data present in the closure plans indicates that the kerosene spills in 1983 pose no risk to human health or the environment.

Comment 4.

Section 3.1.2, page 12, Groundwater. There is no mention of groundwater sampling. If groundwater samples were taken, laboratory data should be placed into the Closure Plan.

Response:

Section 3.1.2 is a general discussion of the hydrogeology of the ICPP. No groundwater sampling was conducted at CPP-59.

Comment 5.

Section 3.1.2, page 15, third paragraph, Groundwater. Drawdown tests were performed "with relatively small pump, so no measurable drawdown was achieved in the wells." If the drawdown test is a significant test, could larger pumps be used to achieve proper results?

Response:

Section 3.1.2 is a general discussion of the hydrogeology of the ICPP and the Snake River Plain Aquifer (SRPA). The information on the pump tests was obtained from available literature and was intended to provide general information on aquifer properties. The pump tests referred to were not conducted in relation to CPP-59.

Although it is not relevant to the closure plan, the response to the question is that yes larger pumps are capable of creating measurable drawdown. However, observation wells are typically not large enough for the size of pumps required to create drawdown in the SRPA. Transmissivity of the aquifer ranges from 4,000 to 2.4 million ft^2/day with a geometric mean of 156,000 ft^2/day . These high rates suggest that drawdown in the SRPA would be difficult to achieve.

Comment 6.

Section 4.5, page 21, Summary. A low precipitation rate during the September 1983 spills may have had "little hydraulic driving conditions to force the migration of kerosene into the soil." Would precipitation rates after September 1983 contribute to kerosene migration into the soils and possibly groundwater unless the soils were cleaned up?

Response:

No, the low annual rate of recharge to groundwater from infiltration precipitation (5 cm/year) and the depth to the aquifer at the INEL would limit the extent of migration and the potential for groundwater contamination. In addition, because this was a low volume surface spill most of the volatile components would have volatilized thus reducing the source for BTEX migration.

Comment 7.

Section 5, page 21, Waste Types Known or Suspected. The latest sentence states that other compounds that may be present such as base, neutral, acid organics (BNA), and semi-volatile organics are included with total petroleum hydrocarbons. Why are they lumped together as TPHs?

Response:

The statements referred to in the Closure Plan will be clarified. Base, neutral and acid organics (BNA) are semi-volatile organics. Kerosene is a middle distillate product of petroleum comprised of a mixture of C_{10} - C_{16} alkanes, alkenes, aromatics, and naphthenes. The typical laboratory analysis conducted for releases of petroleum products such as gasoline, diesel and kerosene includes separate analysis for the volatile components and for the other less volatile fraction. Standard EPA methods typical for investigations at leaking underground storage tanks were used for analysis (EPA Methods 8240 and 8015 from SW-846). Method 8240 is a GC/MS method that provides both compound identification and quantification for the volatile organics. Method 8015 does not identify individual compounds but is used to quantify total petroleum hydrocarbons (TPH) based on use of a gasoline, diesel or kerosene standard.

Comment 8.

Table 3, page 22, Sample Analysis Results. I assume that this table is a summary of the laboratory analytical results. Please provide the original lab sheets in an appendix. Additionally, provide the EPA method number for analysis of VOCs. Also provide the sample dilution ratios for all samples as well as the sample moisture content.

Response:

The original lab sheets will be provided in an appendix. As noted in the response to comment 7, EPA method 8240 was used for analysis of volatile organic compounds. The laboratory data sheets include sample dilution ratios and sample moisture content.

Comment 9.

Section 5.1, page 24, first paragraph. It is stated that the boreholes taken outside of the bermed area are not associated with the kerosene spills and that this area cannot be considered to be within the unit boundary. I disagree with the statement. It is documented that a spill occurred outside of the bermed area when spilled kerosene entered and flowed out of the bermed area through a foam fire protection line. A TPH level of 3800 ppm is a very significant amount of contamination.

Response:

The statement regarding boreholes outside the berm area will be modified. The sample locations were selected in areas likely to be affected by releases outside the berm. However, the relatively high concentrations of TPH detected in some of these locations may not be entirely related to releases of kerosene from CPP-59. Portions of the area outside the berm along Olive Street are commonly used for parking (such as sample location 2). The high concentrations of TPH detected may be due to leaks of motor oil from vehicles parking in the area.

Comment 10.

Section 5.2, page 25, second paragraph, Risk Evaluation. According to the Closure Plan, xylene is the only degradation component of kerosene detected at the site. Levels of TPH indicate kerosene is at 3800 ppm and 310 ppm. If the kerosene remains in the soil without being cleaned up, would the levels of xylene increase as the remaining kerosene is broken down into xylene?

Response:

The statement on page 25 of the Closure Plan will be modified. Xylene is not a degradation product of kerosene, rather it is one of hundreds of individual organic compounds present in kerosene. Analysis for TPH is conducted to quantify these compounds. Neither TPH or kerosene will be broken down into xylene.

Comment 11.

Section 6.1.1, page 26, Sampling and Drilling It is stated that drilling at this unit was limited by the presence of overhead electrical units, building CPP-702, the kerosene tanks, the containment berm, and buried and surface pipelines. It is also stated that sampling locations were selected based on areas likely to be affected by the reported spills while avoiding physical obstacles. The sample locations shown on the map seem to bias the sampling to one area outside the bermed area. There are no shallow samples on three sides of the secondary containment area. No surface elevations are noted on the map so there is no way of knowing if the samples were taken at a higher elevation than the bermed area or an area above where any spilled kerosene would accumulate. Additionally, since the foam fire line is not indicated on the map, there is no way to ascertain whether or not samples were taken near the vent on the line where the kerosene leaked out. Please provide surface elevations of samples taken as well as the location of the foam fire protection line.

Response:

The sampling locations outside the berm were intentionally biased to the area where releases were thought to have occurred. The releases occurred as a result of the overflow from the vent on the foam fire suppression line and potentially in the loading and unloading area near the northwest corner of building CPP-702. The containment berm is elevated approximately four feet above the surrounding ground surface. The surface elevation outside the bermed area generally slopes in a northerly direction, toward Olive Avenue. The location of the foam fire protection line will be included on Figure 9.

Comment 12.

Section 6.1.1, page 28, second paragraph. It is stated that all of the shallow (0-6 feet) sampling was done with a hand auger. However, in Section 6.2, Sampling and Analysis, there is no description of how these hand augured samples were prepared. The sample processing and handling for the cored (deep) samples is described in detail. The hand augured shallow (0-6 feet) samples represent greater than 50 percent of the sampling population yet no sample processing and handling is described. Please provide information on how hand augured samples were obtained and handled prior to shipment to the analytical lab.

Response:

A description of how hand augured samples were obtained and handled will be provided.

Comment 13.

Section 7, page 34, Closure Procedures. It is stated that since no RCRA wastes are associated with activities at this unit, no further closure activities are recommended. Once again, it is not clear whether the facility is to be closed or merely delisted from the COCA. If the intent is to clean close the facility there should be a discussion of how the tanks will be removed, etc. If the facility is to remain in operation, there is no discussion about the adequacy of the secondary containment, e.g., foam fire line leakage prevention, etc. If the tanks are still to be used, with the possibility of future kerosene spills, how can the overflow be "closed." Please provide documentation as to the intent to actually close the facility or continue its operation.

Response:

The intent is to clean close this unit (kerosene spill) under RCRA. The kerosene storage tanks are not part of this unit and will continue to be operated. Since the kerosene in these tanks is a product in use and not a RCRA waste and the tanks are above ground, RCRA requirements for secondary containment are not applicable.

Comment 14.

Missing data and information in the Closure Plan for CPP-59.

- a. Closure costs estimates and liability coverage if tanks are to be removed.
- b. Length of post-closure care if not "clean closed."
- c. Property use restrictions if the overflow is still to be used for the present tanks; or, if tanks are to be removed what will the area be used for?
- d. Post-closure contact person.
- e. If the overflow is to be "clean closed" then sampling and testing methods are needed to demonstrate success of decontamination.

Response:

- a. Close cost estimates are not required for federal facilities under 40 CFR 265.140(c). Cost estimates have been provided in the past as a matter of comity.
- b. Since this unit will be "clean closed" length of post-closure care is not relevant.
- c. Property use restrictions are not required for operational product storage facilities. In addition there are no plans to remove the tanks.
- d. Not applicable.
- e. Based on the data that no hazardous wastes have been spilled or released at this site the unit will be clean closed.

ERRATA SHEET FOR CPP-59 CLOSURE PLAN

Page 6, Section 1.3. Replace closure goal first bullet with:

- o Clean close this unit based on the fact that the kerosene in the tanks is not an ignitable material and technical data indicating that the kerosene spill in 1983 poses no risk to human health or the environment.

Page 21, Section 5, par. 2, replace with:

Kerosene is a middle distillate product of petroleum comprised of a mixture of C10-C16 alkanes, alkenes, aromatics, and naphthenes. The typical laboratory analysis for releases of petroleum products such as gasoline, diesel and kerosene includes separate analysis for the volatile components and for the less volatile fraction (Simpson 1990). Standard EPA methods typical for investigations at leaking underground storage tanks include EPA Methods 8020 or 8240 and Method 8015. Method 8240 (conducted for analysis at this site) is a GC/MS method to identify and quantify the volatile organic compounds (VOCs). Method 8015 is a GC method used to quantify the less volatile fraction as Total Petroleum Hydrocarbons (TPH). This method does not identify the individual compounds but quantifies all the petroleum hydrocarbons present based on a standard of gasoline, diesel or kerosene. Results of samples collected at the site are presented in Table 3. Copies of the laboratory data are provided in Appendix B. Xylene was the only VOC detected in the samples associated with the kerosene spills.

Page 24, Section 5.1, par. 1, sentences 5 and 6, replace with:

However, the relatively high concentrations of TPH detected in some of these locations may not be entirely related to releases of kerosene from CPP-59. Portion of the area outside the berm along Olive Street are commonly used for parking (such as sample location 2). The high concentrations of TPH detected may be due to leaks of motor oil from vehicles parking in the area.

Page 25, Section 5.2, par. 2, replace with:

The following risk evaluation information for xylene, the only volatile organic compound detected at the site, is taken from Golder (1990d).

Page 27, Figure 9, replace with revised Figure 9 (Attached).

Page 29, Section 6.2, par. 2, sentences 1 and 2.

Samples collected by hand auguring and split-spoon sampling (with lexan liners) were processed in a similar manner. All samples were processed on a table after laying out a fresh length of protective plastic. The upper 2 inches of auger sample and the upper 2 to 4 inches of material from the lexan barrel were discarded.

Add Appendix B, Laboratory Data.

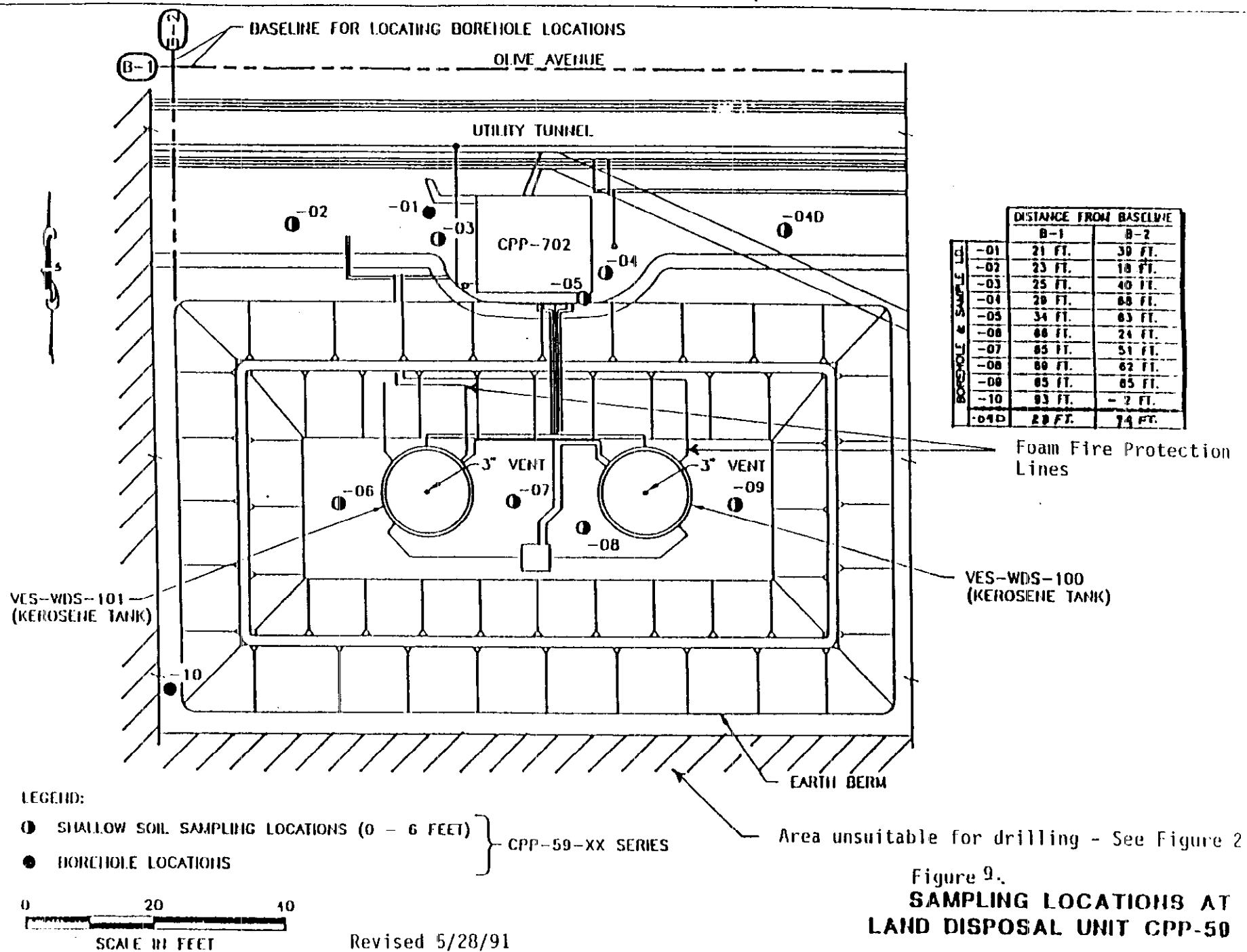


Figure 9.
**SAMPLING LOCATIONS AT
LAND DISPOSAL UNIT CPP-50**